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October 23, 1992

**BY MESSENGER**

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Ms. Donna Searcy  
Secretary  
Federal Communications Commission  
1919 M Street, N.W., Room 222  
Washington, D.C. 20054

Re: ET Docket No. 92-152

Dear Ms. Searcy:

On October 21, 1992, I filed the Comments of The Computer and Business Equipment Manufacturers Association in the above-referenced docket.

I have been advised that some of the copies delivered to the Commission and its staff may not have included the Attachment A referenced in the Comments. I am therefore enclosing 12 copies of Attachment A, along with an original and one copy of the Comments, with Attachment A included for the Public Docket files. I would appreciate your associating these in the appropriate files and also distributing the extra copies, with the attached copies of this letter to those who may have received copies of the Comments initially filed.

Thank you for your assistance in this matter.

Yours very sincerely,

  
Lawrence J. Movshin

LJM/att  
Enclosures

cc: Dr. Thomas P. Stanley  
Robert Ungar  
Julius Knapp  
Richard B. Engleman  
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Charles Cobbs  
John A. Reed

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Before The  
**FEDERAL COMMUNICATIONS COMMISSION**  
WASHINGTON, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In The Matter Of )  
 )  
Revision Of Part 15 Of The )  
Rules To Harmonize The ) ET Docket No.92-152  
Standards For Digital Devices )  
With International Standards )

To: The Commission

**COMMENTS OF THE  
COMPUTER AND BUSINESS EQUIPMENT  
MANUFACTURERS ASSOCIATION**

SUMMARY

The Computer and Business Equipment Manufacturers Association ("CBEMA") hereby comments on the Notice of Proposed Rule Making (the "NPRM"), in the above-captioned proceeding. CBEMA strongly supports all efforts to harmonize the Commission's regulatory requirements with CISPR Publication 22 ("CISPR 22"), which is being adopted and imposed in other countries.

An ever-increasing number of our domestic manufacturers are marketing advanced products outside of the United States. In so doing, they face the prospect of designing and testing their products to two different, and not entirely complementary, emanation standards. It is therefore in the best interests of the industry that there be a single set of regulations that governs the design, marketing and use of a product in whatever country they are sold.

Given the Commission's current reluctance to take such a dramatic step at this time, CBEMA endorses the NPRM's proposal as

a strong first step towards the ultimate objective. Allowing manufacturers the flexibility to choose between the standards embodied in Part 15 and those embodied in CISPR 22 should greatly assist those companies with multi-national aspirations by reducing the number of tests they must undertake and test procedures that they must follow in order to lawfully market their products both domestically and internationally.

It must be made clear in the final order, however, that compliance with either standard -- CISPR 22 or Part 15 -- means determining whether the emanation characteristics of a digital device complies with the limits established in the appropriate standard in accordance with all of the terms and conditions for determining those characteristics set forth in the appropriate standard. At the same time, it is imperative that the Commission confirm that it will apply the same standard that was utilized by the manufacturer/grantee -- whether it is Part 15 or CISPR 22 -- in the event it chooses to undertake any pre-certification or post authorization testing as to a particular product.

CBEMA applauds the decision to adopt CBEMA's long-held view that the Part 15 regulations -- and not the measurement procedures -- are the appropriate place to reflect the emission standards applicable to broadband emissions from digital devices. As we urged in Docket 87-389, the Part 15 standards should contain two limits, one for broadband signals and one for narrowband signals.



CBEMA, a leading trade association of manufacturers and vendors of computers, computing devices, office equipment and information services, has been involved for more than fifteen years in the development of limits and methods for measuring radio-frequency emissions from computing devices. CBEMA has actively participated -- indeed, in many cases been among the industry leaders -- in these activities, from the initial proposals to regulate the emanation characteristics of computers in Docket 20780, through the development of Subpart J of Part 15, through the creation and implementation of MP-4, and, more recently, through the Part 15 Rewrite and adoption of the ANSI C63.4 measurement standards.

CBEMA's member companies have also been actively represented in the international standards making bodies, and in the working groups and subcommittees which advise both the national and international committees which are responsible for setting the recommended standards, including the CISPR working groups and committees that have developed CISPR 22.2/ Ironically, CBEMA members' efforts to achieve an international standard through CISPR originated nearly twenty years ago, almost simultaneously with the Commission's own efforts in Docket 20780. With the Commission's greater interest in assuring that computing devices

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interference characteristics of Information Technology Equipment (as those terms are defined therein).

- 2/ A facial comparison of the Part 15 and CISPR 22 standards demonstrates a close correlation to most of the substantive provisions contained in both, with the differences being largely related to the universe and frequencies of the potentially affected licensed radio services.

could coexist with the extensive and diverse population of licensed services in this country, rules regulating the emanation characteristics of computing devices have existed in this country for over a decade. By contrast, CISPR's standards continue even today through the long and cumbersome evaluation process inherent in its adoption as the global standard.

CBEMA's membership, like this nation's computer industry generally, includes many domestic-based companies who market their products on a multi-national basis. In order to allow these companies, and the industry generally, to maintain a position as world leaders, it has been a basic and consistent CBEMA position that the Commission should, to the maximum extent reasonably possible, harmonize its domestic regulations with those like CISPR 22 being developed in the international standards bodies.<sup>3/</sup>

There are many good reasons for harmonizing our domestic regulations with those being adopted internationally. The market for computers, office equipment and other information technology equipment will continue to be global in scope. As the information technological revolution spreads, consumers will be able to access and share information on a global scale, without regard to the country or location of the originator or

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<sup>3/</sup> To that end, CBEMA requested reconsideration of certain portions of the Commission's orders in Docket 87-389 rewriting its Part 15 regulatory scheme, to the extent that those revisions were unnecessarily inconsistent with analogous regulatory provisions being proposed, or already included in CISPR 22.

destination. An ever-increasing number of our domestic manufacturers are marketing advanced products outside of the United States. In so doing, they face the prospect of designing and testing their products to two different, and not entirely complementary, emanation standards.

To the extent that these companies must create two different designs, perform two different tests, or suffer the expense (and competitive disadvantages) of meeting the most stringent limits by combining, to the extent even feasible, the "worst" of both limits, they are obviously put at a disadvantage domestically and in the foreign markets against competitors who are limited in their effort to that single market. Our domestic industry and the FCC's own representatives have played leading roles in the development of the international CISPR standards. It is therefore in the best interests of the industry that there be a single set of regulations that governs the design, marketing and use of a product in whatever country they are sold.

Given the Commission's current reluctance to take such a dramatic step at this time, CBEMA endorses the NPRM's proposal as a strong first step towards the ultimate objective. Allowing manufacturers the flexibility to choose between the standards embodied in Part 15 and those embodied in CISPR 22 should greatly assist those companies with multi-national aspirations by reducing the number of tests they must undertake and test procedures that they must follow in order to lawfully market their products both domestically and internationally. It should also provide an impetus for achieving a higher level of

reciprocity among countries as our domestic industry proves over time its ability to conform products to both regulatory schemes without causing interference. Moreover, these objectives will be accomplished without any substantive threat of additional interference to radio communications, since the variations in the emanation limits are sufficiently slight.

It must be made clear in the final order, however, that compliance with either standard -- CISPR 22 or Part 15 -- means just that; determining whether the emanation characteristics of a digital device complies with the limits established in the appropriate standard in accordance with all of the terms and conditions for determining those characteristics set forth in the appropriate standard.<sup>4/</sup> In CBEMA's view, it would make little sense, and provide virtually no relief, if the Commission merely provided two sets of limits, the Part 15 limits and the CISPR limits, side by side in the FCC's rules. Rather, the rules should provide that a manufacturer must comply with either standard, but not both, from start to finish in determining the adequacy of its design in complying with the chosen standard.

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<sup>4/</sup> For these purposes, it is assumed that all of the technical provisions, but not the administrative sections, of the CISPR 22 standard would apply. Thus, portions of the CISPR standard providing definitions and classifications would not be applicable domestically; in determining, for example, whether a device was a Class A device subject to verification or a Class B device subject to certification for purposes of the FCC's marketing rules, the appropriate provisions of Parts 2 and 15 would be applicable. On the other hand, provisions in CISPR 22 dealing with limits, measurement procedures, and measurement conditions would apply, even when they were inconsistent with the analogous provisions in Part 15.



Proposed verbiage for the regulations is appended to these comments as Exhibit A.<sup>5/</sup>

At the same time, it is imperative that the Commission confirm that it will apply the same standard that was utilized by the manufacturer/grantee -- whether it is Part 15 or CISPR 22 -- in the event it chooses to undertake any pre-certification or post authorization testing as to a particular product. Thus, if a manufacturer chooses to utilize CISPR 22 in determining the emanation characteristics of a personal computer, the Commission should use the same standard -- including the appropriate test equipment and methodology -- in determining the continuing compliance of that device at its own facilities. To take any other approach would greatly prejudice the manufacturer who chose to take advantage of the benefits of the international harmonization achieved by this rulemaking proceeding.

By taking this approach, the Commission will be providing beneficial relief for those companies who desire to compete in the global marketplace, without making changes to its domestic regulatory scheme for those who do not. A manufacturer who desires to sell products domestically and in Europe will be able to establish a single test site, follow a single test procedure and establish a single design/test/quality control process, presumably using CISPR 22 in qualifying its product line. While certain design changes necessary to accommodate various market

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<sup>5/</sup> Because the new rules would add an alternative without impacting current rules, they should become effective immediately upon adoption.

differences (e.g., changing the power supplies to accommodate the different voltages utilized in various countries) may, in some cases, require further testing to establish compliance for such changes,<sup>6/</sup> at least the test methods, test site characteristics and training will be consistent.

Of course, if the provisions of CISPR 22 change, such a manufacturer may have to change its facilities and procedures as necessary to meet any internationally adopted modifications, but it will not be required to make additional conforming modifications to meet any domestic issues that might develop. As they do today, such manufacturers will necessarily have to maintain themselves current to the CISPR 22 standards in effect throughout the world, even as those standards may change from time to time.<sup>7/</sup> This approach will be of most interest to manufacturers who are designing equipment for sale into CISPR-

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<sup>6/</sup> CBEMA urges the Commission to clarify the requirements that may be imposed on devices that must be changed as to voltage or power supply frequency to accommodate the variations of different countries. In CBEMA's view, if the equipment can accommodate multiple voltages or frequencies, then the manufacturer should be able to determine in its pre-testing which variation provides the "worst case" emissions and run only a single test using that rating. On the other hand, if different components are to be used in each variation, such that the changes would constitute a permissive change under the rules, then of course, those rules would apply to these cases.

<sup>7/</sup> It will not, therefore, be necessary for the Commission to reference a specific CISPR 22 edition and/or specific amendments. The rules can simply allow compliance with the CISPR 22 standards as then in effect. To the extent that different versions are then applicable in different jurisdictions, the rules should require a reference to the CISPR 22 version utilized in all test reports relating to the equipment authorization.

oriented markets -- indeed, the rules should be designed so that manufacturers choose this alternative so that they may more efficiently sell their product outside the United States and not to gain some unintended relief from Part 15 regulations.

Moreover, manufacturers will not be able to pick and choose the best -- i.e., most advantageous -- parts of both procedures, but will instead be required to maintain conformity only with one or the other. This approach should assure that the relief provided from Part 15 is not generally chosen unless multinational marketing warrants the relief necessary to provide a reasonable degree of international harmonization.<sup>8/</sup>

At the same time, until the Commission can, after full notice and comment, fully harmonize Part 15 with the international standards, purely domestic marketers will not be burdened with any quirks or additional burdens imposed in CISPR 22 that are primarily designed to address potential interference problems of other countries that are not problematic in the

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<sup>8/</sup> As the Commission has recognized in the NPRM, there is one exception to this approach: the situations when Part 15 imposes limits and requirements measurements in frequency ranges that are not covered by CISPR 22. CBEMA proposes in those situations (for example, under today's rules when a device must be tested in the frequencies above 1 GHz) to give the responsible party the alternative of using CISPR 22 in those bands where it is applicable and Part 15 in the bands where it is not. In those bands where both do apply, however, the entirety of one or the other standard must be followed. The proposed regulations cover this particular situation. Given the few digital devices that must be tested in the bands above 1 GHz today, and the likelihood that CISPR will move to impose limits in those higher bands as the potential for interference to advanced wireless networks operating in the 1.8 GHz band becomes significant, this is probably only a short term anomaly.

United States. In this fashion, the market disruption that the Commission foresees in adopting the CISPR 22 standard for all digital devices so soon after the adoption of the Part 15 Rewrite Proceeding can be avoided in the near term. In the long run, however, we reiterate that it is essential for the competitiveness of the United States products that international standardization and reciprocity be achieved. Indeed, CBEMA eagerly looks forward to a time when there is one global standard and a global marketplace for domestically designed and produced digital devices. The proposal outlined in the NPRM is, in our view, a good first step towards that ultimate objective.<sup>2/</sup>

The Commission also proposes in the NPRM to adopt CBEMA's long-held view that the Part 15 regulations -- and not the measurement procedures -- are the appropriate place to reflect the emission standards applicable to broadband emissions from digital devices. CBEMA applauds that decision. As we urged in Docket 87-389, the Part 15 standards should contain two limits, one for broadband signals and one for narrowband signals. While the difference between the two should be 13dB, it is important that both limits be recognized and maintained in the regulations. It is not enough to provide relief from the narrowband limits in certain circumstances, which has the potential to mask non-

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<sup>2/</sup> In this regard, the Commission should consider adoption of a transition period during which the dual standard approach would be phased out and a full transition to a single, fully harmonized international standard could be imposed. By establishing a transition at this time, even one of long duration, the ultimate objective can be better achieved by giving all interested parties the maximum notice of this long-term intent.

compliant narrowband emanations in the testing procedure. CISPR 22 properly imposes on all devices both a narrowband and a broadband limit. As in the CISPR standard, if a device meets the broadband limit measured using the QP detector function but fails the narrowband test, it may be retested to show compliance with the narrowband limit using the average detector function. A proposed revision to Section 15.107(a) is also included in Exhibit A.

International harmonization of compliance standards best serves the public interest. Such approach allows our domestic computer, information and office equipment industries to most effectively compete in the global marketplace. It provides the American consumer with the widest array of equipment choices without unduly burdening domestic or offshore manufacturers with undue compliance requirements. It will ultimately ease the Commission's workload by establishing a better system of reciprocity, and thus a global enforcement mechanism with all countries involved in the global compliance program. In the case of CISPR 22, it is particularly appropriate to harmonize the domestic and international standards since our domestic industry and the FCC's staff have played such an integral role in that standard's development. The proposal contained in the NPRM is an

excellent first step toward the ultimate objective, and it should be expeditiously adopted.

Respectfully Submitted,

**THE COMPUTER AND BUSINESS EQUIPMENT  
MANUFACTURERS ASSOCIATION**

By 

Lawrence J. Movshin

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& Bridges  
Suite 900  
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Washington, D.C. 20005

Its Attorneys

October 21, 1992

## **EXHIBIT A**

1. Amend Part 15 by adding a new Section 15.39 which reads as follows:

**§15.39 Alternative provisions for compliance for digital devices.**

(a) For digital devices subject to this part verified by the responsible party or for which an application for a grant of equipment authorization is submitted to the Commission on or after \_\_\_\_\_, 199\_, the responsible party may demonstrate compliance with the regulations specified in this part or with the requirements specified in CISPR Publication 22, "Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment", except that in the case of any conflicts between CISPR Publication 22 and the provisions of §§15.1 through 15.31, and 15.35, the provisions of this part shall apply. To the extent that CISPR Publication 22 does not impose limits on radiated or conducted emanations in frequency ranges that are imposed under this part, then the limits imposed in this part, and the measurement methods required in this part, shall apply to emanations in those frequency bands not covered by CISPR Publication 22.

(b) If a responsible party chooses to utilize the alternative methods provided in this section, then it shall include in any measurement report required under the provisions of Part 2 of these rules a statement that the device has been tested and determined to comply with the provisions of CISPR Publication 22, including a statement of the date of adoption by CISPR of the version of Publication 22 with which the device complies.

2. Amend §15.29(d) by adding a new sentence at the end of the subsection which reads as follows:

...that was in effect at the time the equipment was authorized or verified. If the responsible party has demonstrated the compliance of a digital device with the

requirements of CISPR Publication 22 in accordance with the provisions of §15.39 of this part, then the Commission will determine the equipment's compliance in accordance with the same standard, as designated by the responsible party in the measurement report submitted with the equipment.

3. Amend the first sentence of §15.107(a) by adding the highlighted text so that it reads:

(a) Except for Class A digital devices, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies with the band 450 kHz to 30 MHz shall not exceed 250 microvolts when measured using measurement instrumentation employing an average detector function, and 1120 microvolts when measured using measurement instrumentation employing a quasi-peak detector function.<sup>1/</sup>

4. Amend the tables in §15.107(b) by adding the highlighted text so that it reads as follows:

<u>Frequency of emission (MHz)</u>	<u>Quasi-Peak Limit in uV</u>	<u>Average Limit in uV</u>
0.45 to 1.705	4466	1000
1.705-30.0	13400	3000

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<sup>1/</sup> Devices meeting the average limit when measured using the quasi-peak detector function need not be retested using the average detector function.



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3. Amend the first sentence of §15.107(a) by adding the highlighted text so that it reads:

(a) Except for Class A digital devices, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies with the band 450 kHz to 30 MHz shall not exceed 250 microvolts when measured using measurement instrumentation employing an average detector function, and 1120 microvolts when measured using measurement instrumentation employing a quasi-peak detector function.<sup>1/</sup>

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